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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/523,131

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09/02/2010

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EXAMINER

BORIN, MICHAEL L

ART UNIT

PAPER NUMBER

1631

MAIL DATE

DELIVERY MODE

09/02/2010

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/523,131	Applicant(s) OFER, DROR	
	Examiner Michael Borin	Art Unit 1631	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 December 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4, 6-25, 29-57, 102, 103, 157-159 and 161-163 is/are pending in the application.
- 4a) Of the above claim(s) 7, 10-13, 16-23, 37-39, 50-53, 57, 102, 103 and 157 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 6, 8, 9, 14, 15, 24, 25, 29-36, 40-49, 54-56, 158, 159 and 161-163 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>02/03/2010, 05/24/2010</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 12/22/2009 has been entered.

Status of Claims

Claims 5, 155 and 156 are canceled Claims 1-4,6-25, 29-57, 102, 103, 157-159 and 161-163 are pending. Claims 7,10-13,16-23,37-39,50-53,57,102,103,157 remain withdrawn from consideration. Claims 1-4,6,8,9,14,15,24,25,29-36,40-49, 54-56, 158,159,161-163 are under examination.

Upon consideration of the amended claim language it was deemed necessary that before addressing applicability of prior art, and providing a full response to applicant's arguments, the following issues under USC 112 paragraph with regard to the base claim 1 need to be resolved.

Claim Rejections - 35 USC § 112, second paragraph.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-4,6,8,9,14,15,24,25,29-36,40-49, 54-56, 158,159,161-163 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The rejection is applied for the following reasons and is necessitated by amendment.

F. Claim 1, part (f), phrase “a portion of triangle space comprising 50 % of said triangle space”: A triangle space seem to be an infinite number of permutations of binding points and distances between them. therefore, it is not clear what constitutes a precisely defined cut-off parameter of 50% of such space. Understanding of the scope of said “portion of triangle space comprising 50 % of said triangle space” is essential to define for which scope the now claimed “at least six gauges” are selected.

G. Claim 1, part (f), phrase “3-point pharmacophore corresponding to a point in said portion of triangle space”. It is not clear whether such “point” has coordinates in such a space(and how then these coordinates are defined?), or, if not, whether the “space” (which is ordinarily understood as a three-dimensional realm; see <http://dictionary.reference.com/browse/space>) should be viewed as merely a list of such “point” identifiers of 3-point pharmacophores

H. Claim 1, part (f), phrase “configuration of binding points capable of chemically binding to each 3-point pharmacophore”. It is not clear how a configuration of 3 binding points can be capable of chemically binding to each of pharmacophores comprising the “space” of any possible 3-point pharmacophores defined by “a triplet of distances that form a triangle, each distance being in a range of 2-12 angstrom, and by a triplet of chemical binding point types for the triangle vertices, each chemical binding point type being selected from the group consisting of acid, base, hydrophobic, hydrogen-bond donor, hydrogen-bond acceptor, and aromatic”

I. Claim 1, part (e), phrase “triangular geometric substructure”. It is not clear whether said “triangular substructure” is the same or different from “gauges” addressed in preceding part of the claim. If they are the same, then it is not clear what information, if any, can be obtained by analyzing interactions of compounds (“gauges”) that are capable to chemically binding to each (i.e., without any specificity) of pharmacophores comprising the “space” of any possible 3-point pharmacophores

J. Claim 1, part (e), phrase “identifying a plurality of spatially and chemically specific configurations of binding points in said chemically active area of said target molecule”. According to the preceding parts of the claim, the information to be analyzed is obtained (presumably, see (I) above) from an *in vitro* assay of interactions of a set of gauges that are capable to chemically binding to any and each pharmacophore. First, it is not clear how chemically specific such information would be. Second, it is not clear where is any source of spatial information will originate, if all that is known is *in vitro* (i.e., spatially unrelated) result of interaction with – following the interpretation from preceding

paragraphs – a geometric structure selected from a list of plethora of permutations of binding points and distances therebetween.

Further, as previously addressed, per applicant's clarification (in the In the response of 04/22/2009) the assaying is *in vitro*, rather than *in silico*. Then, it is not clear how *in vitro* assays will measure interaction with geometrical triangular structures used to described the compounds used in the assays. For example, it is not clear how functional and binding assays addressed on p. 30-31 of specification, e.g., a replication assay for DNA target (see p. 31, top), can be used to characterize spatially and chemically specific configurations of binding points in said chemically active area of said target molecule".

Upon clarifying the above issues an office action addressing the full gamut of issues in this application will be issued.

Conclusion.

No claims are allowed

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Borin whose telephone number is (571) 272-0713. The examiner can normally be reached on 9am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marjorie Moran can be reached on (571) 272-0720. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1631

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Michael Borin/
Primary Examiner, Art Unit 1631

mlb